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TECHNICAL NOTES
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STN PUB ALASKA FOREST RESEARCH CENTER
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Cubic Foot Volume Tables for Spruce and Hemlock Pole-timber

The requirements of the Forest Survey of Southeast Alaska and the probability of more intensive management of the forests have made cubic-foot volume tables for pole-timber[1/] trees necessary. Existing cubic-foot volume tables did not give volumes for trees below the 8-inch DBH class.

The new volume table shown below presents gross cubic-foot volume of peeled wood from a 1-foot stump to a 4-inch top. The basis for the table was 127 trees ranging from 5.0 to 10.9 inches in diameter at breast height, taken from both old-growth and immature stands.

Volumes were computed by the Smalian Formula, and curved. In addition volumes were checked by the volume-line method.[2/]

No significant difference was found between the volumes of western hemlock and Sitka spruce of a given diameter and total height.

Table 1.--Cubic foot volume table for hemlock and spruce pole-timber, Southeast Alaska

DBH inches	Aver. total ht. feet	Total height (feet) 20	30	40	50	60	70	80	90	100	110
		Volume cubic-feet between 1-foot stump and four-inch top									
6	44	0.6	1.5	2.5	3.0	3.5					
8	67	1.4	3.2	5.0	6.5	8.2	10.0	12.0	14.0		
10	74				10.7	14.2	16.0	18.2	21.0	23.5	27.2

Aggregate difference: tables 1.61 percent high

1/ Trees 5.0 - 10.9 inches diameter, breast high.

2/ Spurr, Stephen H. 1954. Simplified computations of volume and growth. Jour. Forestry 52:914-922.

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